

OVERCOMING THE CHALLENGES

The existence of our waterway network is a monument to some of the Industrial Revolution's most brilliant engineers. They conquered massive obstacles and many of their structures – like Telford's 1,000-foot (305m) Pontcysyllte Aqueduct in Wales - are still as good as new today.

Restoring and regenerating the inland waterways is just as challenging today. British Waterways uses the best technical know-how to invent new ways to turn our vision for a vibrant and prosperous waterway network into reality.

This experience will be invaluable when the next phase of restorations get under way. To those who say 'it can't be done', here are some examples of how - in partnership - the 'impossible' has already been achieved:

Preserving our Heritage

Anderton Lift is one of the best examples of how to make improvements - in close consultation with conservation bodies like English Heritage - while still preserving a unique structure. The replacement hydraulic ram shafts replicate the originals and nearly a mile's worth of welding covers more than 1,000 repairs to the structure.

Protecting the Environment

Restoration of the Kennet & Avon Canal shows how restoring waterways can benefit the environment. The 10-mile (16km) stretch between Bath and Bradford on Avon had always leaked and this waste of precious water has been solved thanks to an £11million relining programme. The work was both technically innovative and also paid special attention to the protection of the waterway's important wildlife, including reeds, fish and water voles.





Waterways for people

Wester Hailes, near Edinburgh, is a large city-edge housing estate suffering from high unemployment and few local amenities. The Union Canal was derelict and a dumping ground for rubbish. Following liaison and consultation with local communities, the canal has been restored and was re-opened in 2001, as part of the Millennium Link. People of all ages now spend their leisure time by the canal, which provides recreational facilities and a greatly improved environment.

Problems on the Ground

When canals fell into disuse at the end of the last century, it was common for roads, railways, buildings and even whole town centres to be built across their path, with no thought for future restoration. Despite blockages of this scale, waterways have been brought back to life. On the Rochdale Canal, we not only found a way to tunnel under the M62, but also raised a major roundabout by two metres to allow the canal to flow through a tunnel beneath – we even improved the traffic flow in the area into the bargain!

Problems ‘Underground’

The three-mile Standedge Tunnel, on the Huddersfield Narrow Canal, is the UK’s longest, highest and deepest. Restoration was thought ‘impossible’, as the tunnel had collapsed in a number of places with 200 metres of Pennine rock bearing down on the 1811 structure. Last year, against all the odds, Standedge tunnel reopened after a painstaking rebuilding programme. In total, 16,000 tonnes of rock, silt and debris were removed and the tunnel was then secured with over 6,000 rock bolts, 6,000 square metres of spray concrete, and new brick linings.

Scaling the Heights

Hills used to be a canal builders’ nightmare – until the Falkirk Wheel came along. The usual way for a canal to climb a hill was to install a flight of locks or a tunnel, which is complicated and time consuming for builders and end-users. The Wheel has changed all that, using 21st century design and technology to create a 21st century icon for waterways and for Scotland. The spin-off tourism will also generate millions of pounds in extra tourist revenue for the Falkirk area.

